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COLOUR PRINTING WITH LINOLEUM AND WOOD BLOCKS

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THE BLOCK PRINTING OF COVER PAPER

BY

PHYLLIS BARRON

DRYAD HANDICRAFTS
LEICESTER
1928

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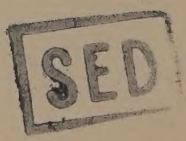

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INTRODUCTION

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OF the crafts now practised in schools, printing from blocks of linoleum or wood is at once among the most attractive and the most difficult. It is difficult because, while requiring the same care and accuracy on the part of the learner as does basket-making or weaving, it demands other capabilities. Given canes or raffia and a commencement, the basket in a sense almost makes itself, but the craft of colour printing assumes an interest in pictorial composition, or a desire to make a beautiful pattern, suitable for manifolding by the conditions of the process. That is to say, unless one has a subject which will make a print, the practice of the craft is mere waste of material.

Fortunately, the instinct of the young reaches towards the picture and the pattern. There is generally not so much difficulty in finding a subject as in choosing between those offered. The new school drawing has shown us that children think in pictures, that they express themselves through pencil and paint, coloured papers or other materials, spontaneously and with ease. They experience none of the diffidence that grown ups, even mature artists, feel in approaching their theme; the composition seems to bubble up within them, and the forms and colours find their places on the paper without effort.

Colour printing accords, too, with another impulse, the desire to manifold. Children press tinfoil on coins or reproduce the embossing of a book cover by rubbing on tissue paper. Printing is manifolding at its highest, a sort of magic very captivating to many minds. The preliminary work once accomplished, be it the cutting of wood or the setting up of type, the printed page glides from the hand or press, without betraying the agony of composition or the labour involved. The work springs into being with a delightful freshness: it never looks 'tired', however inadequate have been the means used to produce it.

Perhaps the first school printing in colour seen in England was at the International Exhibition of School Drawing held

READER!
CLEAN HANDS

in London, when a number of highly coloured prints from Germany attracted attention. Writing from memory, these lino cuts were printed with printer's inks in a press. But before this, Mr. Morley Fletcher had issued some prints in colour, using methods based on those by which the Japanese produced their beautiful colour prints, and as his methods do not involve a press or the use of sticky printer's ink, they are to be recommended for school use, or for students with artistic power and some facility in using tools, who desire to work out their own compositions without the aid of professional printers, or even a press. There is another consideration worthy of the artist's attention. It has been proved by Morley Fletcher and his followers that few as are the materials and processes, yet by their means true works of art can be produced. The colour print may reveal the most delicate and beautiful form expressed in subtle line, and the whole glowing with colour, which need not even be flat. The growth of the craft, too, accords with the tendency of our time to enjoy colour. The black and white processes, such as lithography and etching, will always be with us, and on their own ground cannot be surpassed. Yet, judging by the attention given to the process by numerous artists, by comments in the press, and the rapidly growing literature on the subject, the colour print is coming into its own, demanding the attention of the collectors, who need not doubt the 'staying power' of the product. Printed on the toughest and finest paper the world produces, with the best and most permanent of artist colourman's pigments, the colour lies on the paper with a beautiful mat quality. Lastly, the print accords well with the surface of a wall, far more closely indeed than the 'in and out' quality of etchings and painting.

Dealing first with the limitations of colour printing as a school craft, it has been found that a child whose strength is unequal to manipulating wood, can deal with linoleum with ease, and produce good work. Professor Cizek's pupils proved that. Linoleum, indeed, is not unknown to professional printers, and on an emergency, for an 'outsize'

letter or a band of colour, it has demonstrated its usefulness, for it can be cut to shape readily, and its smooth surface is ideal for printing in a press.

It is not even necessary to obtain the thick and expensive sorts, for the thinner makes may be glued down on wood or even used alone: even if one cuts right through the material, no harm is done.

The great use of printing in schools is its stimulus to the expressive side of the drawing lesson. Some schools have boldly produced illustrated books, the lino cuts being either printed in a press with the type, or rubbed off by hand in the way described here. If the subject is in black and white only, the composition may be reproduced either by means of a small quick gouge, the Cizek method for early efforts, building up the composition with white lines, in the manner of wood engraving, or the white spaces between the lines may be cut away with a knife and gouges. For finer work in the former method graving tools may be used.

Block cutting will not be carried on long before everyone in the classroom, including the teacher, will have learned a valuable lesson in the use and limitations of the pencil. This implement is so cheap, so ready to the hand, so obviously a thing to draw with, that teachers might be pardoned for supposing that the drawing lesson without the pencil would be impossible. Yet the great draughtsmen of the past never saw a pencil. Albert Dürer and Titian both relied almost exclusively on the pen, occasionally making use of black chalk, both mediums which do not allow of much alteration or erasure. Many pupils can hardly be persuaded to draw without indiarubber within reach. But while the pencil, with or without rubber, is admittedly a most useful medium for studying form, in original composition for reproduction by printing it must necessarily take a subordinate place because, for all practical purposes a pencil line cannot be reproduced, and if it could, a few minutes' drawing produces more lines than one would care to cut. Both for black and white and colour the brush is the instrument for setting out the subject efficiently. This difficulty, the tendency to

produce a composition so complicated or small in scale that it is impossible to cut, suggests a rule of composition, which is implied in Professor Cizek's dogma, that any human figures in the composition must *occupy* the paper. He knows that children, like other primitives, envisage a wide environment, in which their tiny figures act their parts. But this attitude towards the subject is wrong, simply because, so set down, the work cannot be cut. That is to say, at once the pupils come up against suitability of means to an end; they have to consider their medium.

In dealing with colour, the discipline of materials is still more pronounced. The ordinary tin colour box with its numerous and unnecessary pigments (no child's box should contain more than six) is too tempting. Often the colour is little more than *dirt* arising from jumbled colours, which is, however, not seldom beautified by the white paper shining through. The discipline of colour printing, reducing the composition to a few related hues, is an excellent corrective to colour daubing. On the other hand, the process has nothing to do with the three-colour printing of the press, where the colour is obtained by dots of red, blue, and yellow impinging everywhere. In the method here discussed there may be two up to twenty or more colour patches each being printed separately. The method has no commercial value, and therefore the question of time does not enter.

One caution should first be impressed on the learner. The composition should be modest in size. The craft entails, in the preliminary stages, considerable labour, and a large area means waste of materials and probable abandonment of the subject. But the teacher can make sure of this by supplying only small blocks.

On no account should lead pencil be used on the linoleum (or wood), as furrows might be produced, ruining the printing surface. Before using the brush a little Chinese white (water colour) should be rubbed on the linoleum to lighten the surface and remove the greasiness.

The print will be in reverse, so any lettering will have to be drawn backwards; a knight in armour must brandish his sword with the left hand, a fair English maid wear her engagement ring on the right hand, and so on. To obviate this difficulty, the line part of the composition should be traced on thin tissue paper. To overcome the greasiness of the linoleum, which may prevent the paper adhering, a raw potato should be cut and rubbed over the surface.

The best paper for tracing is Japanese tissue, obtainable at a stationer's shop which supplies typewriting materials, but any thin tissue will do except tracing paper, for this cannot be pasted down properly. As it is difficult to manage a floppy piece of tissue, the tracing, which should have been made with a fine brush and Indian ink, the ordinary waterproofed sort in bottles, must be placed face upwards on a thick pad of blotting-paper, and the (well-pasted) block brought down on it. The block should then be turned over, and the paper dabbed with a rag, until it adheres thoroughly. When thoroughly dry, and paste adheres best when dried under pressure, the paper should be rubbed lightly with the finest sandpaper until only the thinnest film of paper is left on the surface. This makes the tracing easier to see. The strongest paste is essential, or even glue which should, however, be used very sparingly, so that only a thin film of it covers the surface of the block.

The three-cornered knife is the only suitable tool for cutting the lines. The blade presents three surfaces forming the point, and the more perfect these planes, the sharper will it be. The knife probably is supplied roughly ground, so the operation of sharpening will be described, especially as it requires to be frequently repeated.

Oil a long flat oil stone, take out the metal blade of the knife from its handle, and, *keeping the bevel in contact with the stone*, move the steel backwards and forwards with a firm pressure. The blade should be frequently inspected during the sharpening to ascertain what is happening to the bevel.

While passing the steel along the surface of the stone do not press on the point of the blade, but rather on the heel of the bevel. The flat side should not be rubbed on the stone, the sharpening being confined to the bevel. The blade should not be stropped on leather; it is preferable to repeat the sharpening on a piece of very hard Arkansas oil stone, which will remove the wire edge, and give a hard strong point.

To use the knife, hold (and guide) it in the right hand, pushing against the back of the blade with the middle finger of the left hand. It should be noted that a left-handed student requires the knife to be bevelled on the other side. Cut with the flat side of the knife against the line, but sloping away from it, then turn the block, and cut along the first cut, so that a strip of linoleum (or wood) is removed, leaving a V-shaped ditch bordering that side of the line. Repeat the process on the other side of the line, *not forgetting the ends*. The cutting should be done with the utmost care, for on it depends the success of the print. Great force need not be used. The knife should not be used for scraping or removing waste wood, nor should there be any side strain, for that is liable to break off the point. The clearing away of the spaces, although the greatest pains should be taken, does not affect the result, being negative in character, for the spaces show white in the print.

The register marks (into which the printing sheet is fitted) should now be drawn and cut with the knife held upright;

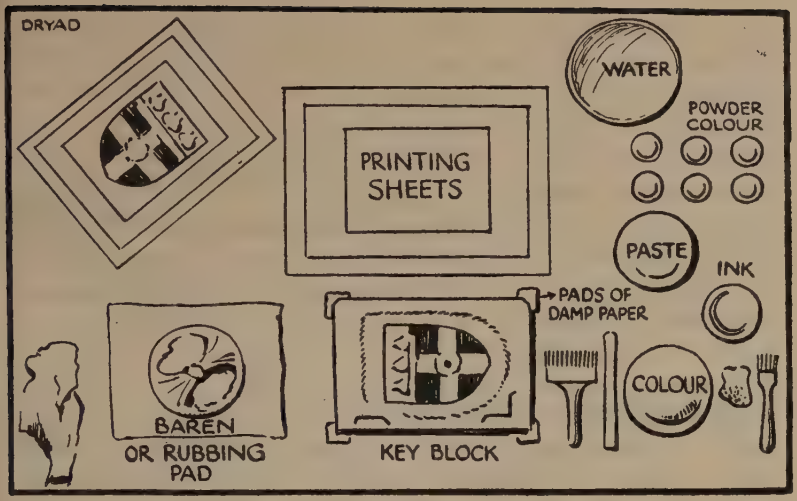


Fig. 1

they are shown in Fig. 1 on the key block, also on page 18. The surface should be removed from them with a chisel or flat gouge to the depth of a postcard.

Now, with a small quick gouge, commence clearing by making a trench around the lines, and as close to the V-shaped ditch as it is safe to go. This gouge should not be pushed, if working on wood, but tapped with a light mallet. (Of course, there may be spaces too small for this gouge to enter.) The remaining spaces may now be cleared away with larger and flatter gouges, the gouge-made ditch enabling this to be achieved without injuring the lines. By constantly turning the block it is possible to cut always *away* from the lines.

To keep the block steady, the worker will require a 'bench-hook,' to which a strip of wood has been added (Fig. 2). The bench-hook should be prevented from moving to the left by a wooden peg let into a hole in the bench or table.

The last operation in clearing consists in going round the lines with one's smallest quick gouge, removing slivers of wood. The smallest spaces may be removed with a very

narrow chisel, and in these cases the depth should be of the slightest, only the surface being removed. Even in the widest spaces the depth need not be much more than one-eighth of an inch.

When the clearing has been completed, the film of paper should be washed off with a brush or soft sponge, and the block is then ready for printing the impressions required for the colour blocks.

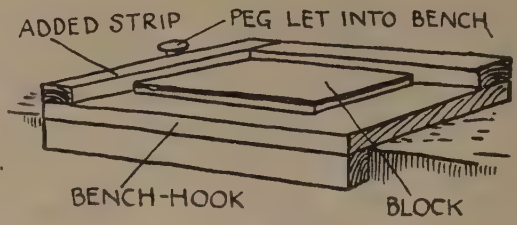


Fig. 2

Of the printing materials, the first in importance is the rubbing pad. The Japanese baren is most efficient, but the leaflike sheath of the bamboo which covers it soon wears out, and must be replaced by another. This must first be soaked in water to make it pliant. Before removing the old covering, examine closely the way it has been applied and tied.

In the absence of a baren, cut out a circle of thick cardboard about 5 inches across, and over this stretch a piece of stiff book muslin, or similar fabric, bringing the ends over the back, and tie tightly. The knot serves as a handle.

Paste will be required of wheaten, or preferably fine rice, flour. Use about six parts of water to one of flour. The flour should first be mixed with a little water to the consistency of cream, without lumps. Boil for about five minutes, then pour into a narrowish stone jar. Ink should be prepared beforehand. Break a stick of Indian ink into pieces and leave in water for three days. Then pour off the water and put the softened ink into a wide-mouthed bottle. A little pad of paper tacked to the bottom of the cork and damped with a drop of creosote, will obviate an unpleasant smell from the ink.

For making the colour impressions, blocks of linoleum or cherry wood should be at hand, and sheets of printing paper. With a wide brush take up a little of the ink placed

ready in a saucer, and a little paste (in another saucer) and brush the key block with the ink and paste, *including the register marks*. Place a sheet of the printing paper (not tissue) on the block and rub with the baren or pad, interposing a piece of tracing or 'butter' paper between. The moving pad should describe Vs or Ws, not circles. If the impression is successful, paste it on a block as described above. Repeat the process until the blocks have each their sheet of paper pasted upon them. When dry, rub the surface with the glass paper as before, and oil slightly if the line does not show clearly.

The colour patches should now be considered. Two or more patches, if far enough removed from one another, may be cut on the same impression. As a rule, an inch of space should intervene between two patches. The block may be utilized later if space allows by pasting on another impression. If working with wood, both sides of the block will be used, of course.

Go round the colour patches with the three-cornered knife as before, *cutting through the middle of the thickness of the line,* so that two adjoining patches of colour will exactly meet. Do not waste away all the unused surface, as it may be wanted to support the paper; it will be sufficient to remove about an inch around the colour patches, which form islands on the block. The outer edge of the trench should be trimmed with a flat gouge and smoothed with glass paper; this prevents the pad from marking the paper by rubbing against sharp edges. Cut the register marks on each impression as described above.

DRYAD

RED

YELLOW

A COLOUR PRINT WITH LINE IMPRESSION
AND TWO PRINTINGS IN COLOUR

PRINTING

When all the blocks are cut, cleared and ready, printing may be commenced. Elaborate although the preparation of the blocks sounds, this is only preliminary to the real business, that of printing, and this being done by hand, one's knuckles taking the place of a press, it will be seen that it is an operation of some delicacy, demanding strict attention to detail. The printing should be done on a table, the height of which enables the printer to use his strength and weight, without stooping unduly.

The most important item is the paper, for on it will appear what all this labour has been directed towards. The best paper for the purpose is Japanese, made from the bast of the mulberry, because it is tough, the fibres being longer than those of any European paper. But it is expensive and difficult to obtain nowadays. A fair substitute may be found in the duplicating paper used for typewriting, the absorbent blotter-like kind. The paper should be cut to the right size with sharp, clean corners. Half as many sheets of blotting paper somewhat larger than the printing sheets will be wanted, also two boards. As the latter are apt to warp after damping, sheets of thick glass, plates of zinc, or slates may be used.

Lay a sheet of blotter on one board and well damp it with a wide brush. On this place three sheets of printing paper, the printing face downwards; on this place another damped blotter, then three more printing sheets, and so on. Over all place the other board, with a weight on top. The moisture from the blotting paper will be sufficient to damp the printing sheets, the process occupying an hour perhaps.

If Japanese printing paper is used, this being absorbent, must be sized before being cut up for printing. To prepare the size, take five sheets of the thinnest table gelatine (sold in packets), and folding them up, place them in a small saucepan, into which pour a pint of water. Place the saucepan in another, somewhat larger, in which is a little water, and set on to heat until the gelatine has dissolved, then add

alum in powder, say a teaspoonful. The alum hardens the size and has a good effect on the colour. If a scum rises to the surface strain the liquid, or wait until the scum disappears, which it will do in a few minutes. While the size is heating the sizing requisites should be prepared. On the printing table place a drawing board with a block beneath so that it is inclined. On the right of this should stand the saucepan containing the warm liquid size. Place a dry sheet of Japanese paper on the board, smooth or printing surface uppermost, and with a wide brush, say three inches across, dip into the liquid size and brush carefully across the paper.

Now pick up an ordinary pin in either hand, raise the damp sheet by its top corners (which should be left unsized), and pin it to the projecting table ledge, so that it hangs without folds. It is important to avoid kinks in the paper while brushing on the size or while hanging up, as such marks can never be got out. Leave the sheets hanging until dry.

While the printing sheets are damping between the blotting papers, the printing materials should be arranged on the table as shown in Fig. 1. The colours and wet materials are on the right, the dry on the left.

For colours one may use ordinary water-colours in tubes, or better still, in powder form. Powder colours are cheaper, and being less finely ground than the tube colours, they 'cover' better. They show, too, the actual hue of the pigment, whereas directly the powder is mixed by the manufacturer with glycerine for water-colour, or oils and varnish for oil paint, the tone darkens, so that one cannot tell what the colour really is until it is diluted. Some of the pleasure of colour printing lies in handling these brilliant-hued pigments in their respective bottles; one realizes clearly the variations, say the depth of French blue against the brightness of cobalt, and the blueness of both compared with the greenish tint of cerulean.

A palette knife is essential, and a quite efficient one may be made from a broken flat ruler, thinned and shaped with a chisel and rubbed smooth with glass paper. A sponge is

required to wipe the block clean. Two brushes at least will be wanted, a wide and a narrow. Four pieces of blotting paper folded into pads about an inch square, and damped, should be placed under the block, one at each corner; these keep the block steady while printing is proceeding.

The colour, if in powder, should be mixed with a *little* water, on a plate, with the wooden palette knife. With the brush take up, first colour, and then paste ready on another plate. Brush briskly across the colour patches, in two directions to distribute the colour well, then brush *lightly* so that an even surface of colour is produced. If a light tone is required, the brush should take up more paste and less colour. Directly the block has been coloured, printing must commence, because the moisture is all the time being absorbed, especially by the wood block. One must print at top speed to secure the best results.

Before commencing to print, all the damping sheets of blotting paper, except the top and bottom ones, should be removed, leaving the printing sheets face downwards as before. In proving or testing the blocks by a first printing, it is well to begin with the line or key block. One can then watch the colour patches as they are printed, to note if they coincide or 'register' with the line. As a rule, however, it is better to print the line later, after the larger areas of colour have been printed, that is, if these adjoin. Colour patches which do not adjoin should not be printed before the line, because it is not possible to tell while printing whether they are registering correctly.

Remove the top board from the printing sheets and place it on the left as shown in Fig. 1, with a block beneath, so that the board is inclined. On it place the top sheet of blotting paper. Note that in Fig. 1 the printing sheets are near and opposite the block to be printed, for convenience of picking up. After colouring the block as already described, the printing sheet should be picked up between the fore and middle fingers of both hands, and the right-hand bottom corner fitted into the right-angled register mark on the block, the thumb being used to keep it in position.

Then the bottom edge of the paper is brought against the left-hand register mark, and also held in position.

The fingers of both hands are then removed smartly, and the paper should fall in position on the block, being prevented from shifting by the pressure of the thumbs. This procedure may sound lengthy and complicated, but it is the work only of a moment, and a little practice with a spare sheet will make the printer adept. The printing paper should not be waved about, but brought into position on the block with as little disturbance of its flatness as possible. Success in printing depends largely on keeping the paper flat, and its flatness is consequent on its being kept at the same degree of dampness, which is somewhat difficult to attain, as every printing tends to damp some part of the surface, while the remainder inevitably gets drier as the sheet is exposed.

Directly the sheet is on the block, place the transparent paper on it and rub with the pad, lightly in the case of the line block, except in places where the line widens out into a patch as the black ground of the shield behind the cross. (See page 12.)

Any faulty impressions should be consigned to the bottom of the batch so that they will come at the top when another block is commenced. By this means one is more likely to secure some perfect impressions out of the batch.

The line block must not be printed too wet. The brush, although it should be soaked in clean water to prevent hairs from moulting out, should have most of the moisture removed by shaking and wiping with a rag before use. Only as much water as is necessary to convert the colour to a paste should be used, it being remembered that water is *poison* to good printing. Too wet paper, colour or brushes are certain causes of failure.

When all the sheets have been passed over the line block they should be turned over and again placed between the boards, in readiness for the next printing.

One of the charms of hand colour printing consists in gradating the tints in a way almost impossible to a machine

printer. A sky, for instance, may gradate its blue from above, down to almost white. This is done by dipping one end only of the wide brush into the colour, and the whole width of it into the paste. By brushing across the block a beautiful gradation is obtained, such as we see in the Japanese colour prints. When Japanese printers acquired prussian blue from the west, they were struck by its depth of tone, and delighted in making gradations of sea and sky, from the full strength of the colour up to white.

Fig. 3

If during the printing, in spite of care, the printing sheets become hopelessly cockled they should be redamped, placed between strawboards and pressed for a few minutes. The key block, especially, needs to be printed with perfectly flat paper and not too damp. Cockled paper inevitably picks up ink or colour from some part of the block not intended to show.

When all the blocks have been printed, and while the printing sheets are still damp, they should be placed singly between sheets of absorbent cardboard (strawboard will do very well), and the pile put under heavy weights or in a screw press for, say, twenty-four hours, when they will be found quite dry and perfectly flat.

Lastly, the blocks deserve care. When in use they should rest on the paper pads already mentioned, so that the surface need never touch the table, which should be wiped clean before use, as fragments of paper and other rubbish may cause trouble in the printing. After printing, the blocks should be dried, wrapped in paper and placed on a shelf. If a block warps, wet the hollow side. Some printers have their blocks 'housed' into ledges of hard wood (Fig. 3). These keep the blocks from warping, and from contact with harmful particles as tintacks, etc.

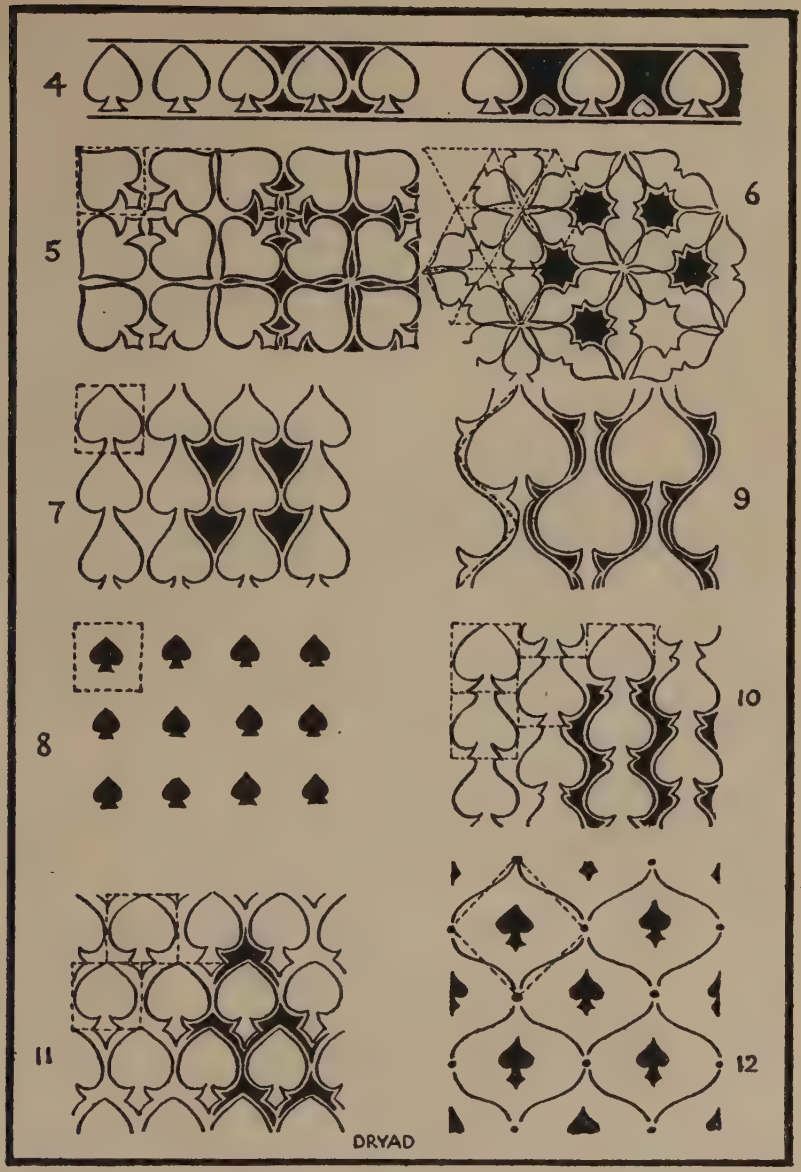
The foregoing has been written in view of the needs of teachers using colour printing as a school craft. But as a form of artistic reproduction, colour printing is one of the

interesting art movements of the present day. It arose mainly through the enterprise and skill of Mr. F. Morley Fletcher, who, as already mentioned, some thirty years ago, while working in conjunction with Mr. J. D. Batten to discover a method of artistic reproductive work in colour, unearthed the Japanese methods and tools, and applied his new-found knowledge in producing some charming colour prints, unlike anything previously seen in Europe. Practically all the artists printing in colour from wood blocks have learned this craft directly under Mr. Fletcher or indirectly through his book, which should be read by those wishing to go further with the craft.

Wood is certainly far superior to linoleum in many ways, but the cherry wood requires more handling, more knowledge of wood working tools, than perhaps is possible for young children to acquire. Those, however, who wish to take the craft seriously as a means of artistic expression should certainly use wood.

Another development of the process is that used by Mr. W. Giles, who uses zinc plates instead of wood, and etches out his spaces with acid. Specimens of the plates with a description of the method may be seen in the Department of Engravings, Victoria and Albert Museum.

Print from lino block, showing register marks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DRYAD

PATTERN PRINTING

Besides the making of prints, practically the same process is used for the printing of patterns on wallpapers and textiles, the best (and most expensive) of these being printed by hand from wood blocks. For the cheaper kinds of printing a roller replaces the block. Necessarily with long lengths of printing materials, such as wallpapers, the relative positions of block and paper are reversed. Now, it is the paper which lies on the table, and the block is brought down upon it. First the paper has to be coloured with the ground tint of the colour scheme. In the workshop this is done quickly and dextrously, first by unrolling a roll of white paper on a long table. Then the operator with a pail of colour and a great brush slops the liquid on the paper, while a companion following closely with a brush as wide as the paper floats the colour smooth. It is a wonderful operation to see done so easily and quickly, and a lesson in washing colour; never to touch the same place twice, to keep moving on, is the secret. Still more remarkable is the way in which the two workers armed each with two wide crutches pick up the damp, lank length of paper, walk with it hanging aloft on the crutches across the room, and hang it on supports to dry, without mishap.

The printing is done with blocks fastened to a movable arm. The block is brought down on to felt charged with colour and floating on jelly, and thence on the paper, being pressed mechanically. At the side of the block are small pins which print their position on the edge of the paper and thus afford a 'register' for the other colours. The paper rests on a table covered with felt, so that the surface of the block is pressed well into the paper.

Either printing on paper or fabric can be done perfectly with linoleum blocks mounted on wood.

Pattern printing inevitably leads to the consideration of repeating pattern, the mystery and difficulty of which lies not so much in the forms, as in knowing what are the possibilities of arrangement. Any form repeated becomes

pattern. For a preliminary study of repeating design, a very familiar motive should be taken like the 'pips' of playing cards, say the 'spade.' A piece of coloured paper should be folded several times, the 'spade' drawn on it and the whole cut out with scissors, when enough units will be obtained for a first lesson. In Fig. 4 the units are placed side by side. At once a border pattern is obtained by mere repetition, and fresh forms start from the background, owing to the contiguity of the units. The units may be differently spaced, or reversed to secure variety.

For 'all over' pattern of a horizontal character, the 'spades' may be placed as in a tile pattern of squares, forming two series of starlike shapes and requiring at least seven units. Again, new decorative forms arise from the disposition of the units (Fig. 5). The only other (horizontal) arrangement possible is obtained by placing the units in a net of oblique lines, forming equilateral triangles, or hexagons, the honeycomb arrangement (Fig. 6).

For upright surfaces where it is desirable for the pattern to 'grow' upwards, the spades may be arranged as in Fig. 7, and again the background appears in new decorative shapes. Of course, the square net may be varied by using as the spatial unit, rectangles, high or wide. In these cases, the unit of form varies with its new environment. The motive need not fill the space, it may merely occupy it, with a resulting spot pattern (Fig. 8). All these arrangements tend to give stripes horizontal and vertical. If the motives are rearranged obliquely, patterns are obtained as in Fig. 9, an easy way of producing what is called a 'drop pattern,' because the alternative 'pip' seems to drop half-way. Fig. 10 shows another method of setting out which, however, arrives at much the same result.

These are the only plans for producing patterns repeated in the same direction, except that by turning Fig. 10 round, a new arrangement is obtained like the laying of bricks (Fig. 11). This, again, leaves gaps and leads to the form being extended into the vacant space. It is really a variation of the diamond repeat.

In Fig. 12 the 'spot' has been enclosed by a meandering curve, a curve which has been exploited by designers past and present.

What differences should there be between the character of a design for a wallpaper, and one for a fabric? Generally, the wallpaper should not be too insistent in line, being kept quiet by paleness of colour or the interlacing of form. With fabrics, like clothes or curtains, where the stuff falls in folds and the pattern is obscured, much bolder forms and stronger lines may be used. Horizontals especially, become beautifully curved in hangings, and this is a providential arrangement, for stripes are the readiest and easiest of all weaving patterns.

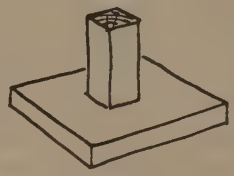


Fig. 13

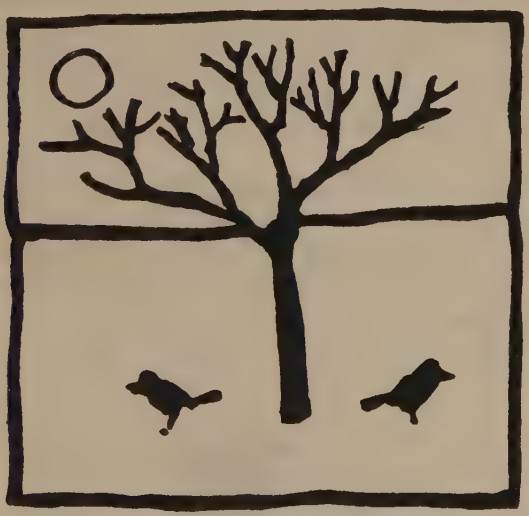
The pattern should be worked out for several repeats, a tracing made on tissue paper and pasted down as described already. Before the design has been cut and cleared, the block should be turned over and a handle about one inch square let in, say, to a depth of one-eighth of an inch. This can be removed while the work of cutting and clearing is being carried out (Fig. 13). The paper should be spread out on a table and the ground colour, which need be merely thin water-colour washed over with a wide brush. When the tint is dry or nearly so, the block can be brought into use. Under the paper should be placed a thickness of blanket or felt. Colour may be applied to the block by painting it with a wide brush, or bringing it down on a piece of felt charged with the colour. The block may be pressed on the paper, or pressure may be applied by tapping the handle smartly with a mallet.

The colour should be of the consistency of cream: poster colours or those used for painting walls will do very well. The pattern can be so contrived that each corner of the block is occupied. This will provide register marks for the next application of the block. This is not necessary in professional printing, because the block occupies the whole width of the paper.

Similar blocks may be used for pattern printing on textiles. Miss Phyllis Barron has produced beautiful effects by these simple means. The procedure is the same as for paper, with the substitution of some even fabric like linen, and the use of chemicals which either bleach the colour of the materials or become 'fast' in it.

But as such printing involves many processes of great intricacy, and the use of dyes and mordants, troublesome and even dangerous to handle, for school use a substitute may be found in coloured inks thickened with a little starch paste or gum. Otherwise the procedure is the same as printing on paper.

On pages 33–36 will be found examples of Indian block prints for hand-printed cottons. These traditional patterns follow very simple arrangements such as borders, stripes, spots, or more closely repeating patterns, and give gay and charming effects.



A linoleum cut by a child of nine

Examples of Children's Line Woodcuts

PRINTING IN A PRESS

If a small printing press forms part of the school equipment, the scope of printing from linoleum or wood blocks is considerably widened, although the registering of colour blocks is rendered somewhat more complicated, being indeed a matter of guess work and trial until the exact position is found. The block should be placed on the bed of the press with a sheet of dry blotting paper resting on it, passed through the press and the lever pulled, at first without inking. If no impression is detected on the blotting paper, the block must be raised until a good impression is gained.

The printer's ink is applied to the block with a roller such as is used by photographers. The paper, which may be of any sort, should be well damped before use. Initial letters come well in press work, and are a good introduction to the illuminating side of formal lettering.

Of course, if desired, the letters may be printed by rubbing as described in the first section.

Italian block-printed cover paper designs
The originals are in red and blue

A NOTE ON THE BLOCK PRINTING OF COVER PAPERS

By Phyllis Barron

INTRODUCTION

THE printing of end and cover papers is quite an old craft, but one which was used more in Southern Europe than with us. If you go into any Italian second-hand bookshop, you will find a variety of interesting simple patterns, both on the covers and the end papers of many of the volumes. It is worth taking up for schools, as it gives a number of possibilities not only for book covers, but for covering boxes and other things made of cardboard, and by the use of linoleum, it is a simple enough craft for comparatively young children.

The following short article was written by Miss Barron, who is a very accomplished designer and printer of beautiful textiles, and has also turned her attention to paper, and we think that the suggestions here given will be useful to teachers and others.

H. H. P.

DESIGN AND MATERIAL.

Wood or linoleum blocks can be used for printing. I have seen some very interesting designs printed from cut potatoes by children who found linoleum too hard for their hands. Printing on paper is an easy matter, and there are many uses to which it can be put: covers and end papers for books, blotters, boxes, lampshades, etc., and even wallpapers if the printer has time and patience.

When one is inexperienced in designing for another medium, it is very difficult to see how a drawing is going to look when it is cut and printed. It is best, therefore, to start on the cutting as soon as possible. The beginner will probably find that he cannot cut fine lines and that his drawing must be simplified and kept flat. The success depends not on learning to do what is difficult, but in finding out what is easy. The best plan is to start cutting a small spot or unit as

soon as possible and to use this small block as a shape with which to design. There are many ways in which each small block can be used, and they give endless scope to the printer for designing.

Examples of single units intended to be spotted are shown on page 34 (Indian wood blocks). Each of these can be used in many different ways, are quick to cut and most interesting to print, as one can continually find different arrangements of one, and it is also possible to use several such spots together. On page 33, No. 3, we see a block on which has been cut six repeats of the same unit. The object of this is to make the printing of long lengths of stuff quicker. The great disadvantage to us is that it prevents, or at best very much limits, any new arrangement of the design.

On page 35 are four more Indian blocks where the units are repeated several times. By cutting a single unit of any of these we could print the arrangement shown and several others as well.

Besides cutting a pattern intended to be spotted, it is most interesting to cut a single unit of the type shown on page 30. By printing this in different ways one can much more easily judge what arrangement and shape would be best for a larger block composed of a number of units if one wanted to cut it later.

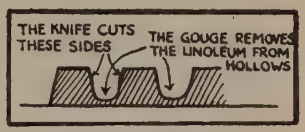
In an all-over pattern the shape of the block is a very important point. A rectangle should be avoided whenever possible. This is because a straight line cutting through the

design instantly catches the eye, and one sees squares all over the pattern. An example of this is shown at A (Plate 1), where the block has the effect of bricks instead of allowing the pattern to flow uninterrupted.

The illustration B shows a design of which one repeat was cut in a triangular shape and has a white line round it. The fitting is unsatisfactory at the best as it shows a diagonal line through the middle of the square. At its worst this square does not fit at all. The block also has to be turned for each alternate print, which is difficult to manage. In the new arrangement of this block, shown C, two repeats are cut and the fitting is much easier; no overlapping or gaps occur, and the block can be printed straight away without any turning.

Pins are often used in the corners of the block as registers for the fitting. These are arranged so that they fall on themselves or on some part of the pattern already printed. They are very difficult to fit properly, and I think better left out.

CUTTING THE BLOCKS. Now take a very sharp knife with a fine point, and draw the outline deeply into the linoleum. The knife should be held at a slight angle so that the pattern is wider at the bottom. If it is cut in at the bottom, the top edge will be weak and break away. When all the drawing is done with the knife, the background, or part which is to be left uncoloured, should be cut away with a gouge.

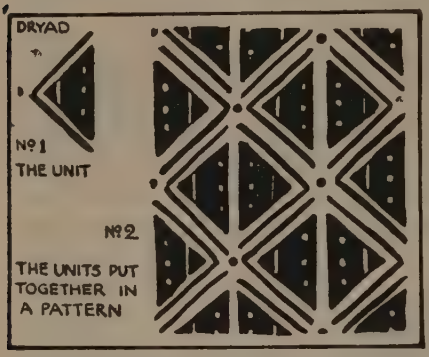


Section of block showing angle for knife

When the pattern is cut it is stuck on to a piece of wood, previously cut the right shape, with spirit shellac, and put under heavy weights to dry. When dry, it is ready for use. Some people prefer to mount the linoleum first before cutting. Large blocks are easier to manipulate if a handle is screwed into the middle of the back.

PRINTING. When the block is cut and the glue dry, the colour may be mixed with the thickener (see page 32) and spread with a brush upon a piece of felt which is laid upon the pad. A separate brush and felt should be kept for each

colour used. The quantity of thickener is determined by the density of the pattern and the quality of the paper, and trials must be made. If the colour is used too thin it will squeeze over the edges of the block, if too thick it will make a mottled pattern. This sometimes gives a very pleasant effect, but it must be dealt with discreetly. The paper is laid upon a table or drawing-board padded with felt (like an ironing board). Now place the block face down upon the colour pad and lift it up and down two or three times—never draw it across the pad, or the colour will stick on the cut side. Starting at the left top corner of the paper, print the whole sheet, recolouring the block each time. When the sheet is printed let it dry flat. The blocks should be carefully washed after use with a soft brush and cold water, and dried with a rag. If they are allowed to stand in water, the wood will warp. The pad should be well washed under the tap to get as much colour off as possible, and, if possible, put through a mangle.



Another method of printing cover papers is to use coloured or black printer's ink. This must be spread very thin with a roller or squeegee on a flat stone or piece of plate-glass, and the ink is put on the block with the roller, working from back to front and side to side. The block must then be put on to the paper with pressure from a printing-press, or an old screw letterpress will serve the purpose.

This method can be applied to printing textiles in a simple way, and has proved the most satisfactory for schools, as the hand-printing of textiles with mordants requires apparatus for steaming, etc., and is very difficult to carry out without proper equipment.

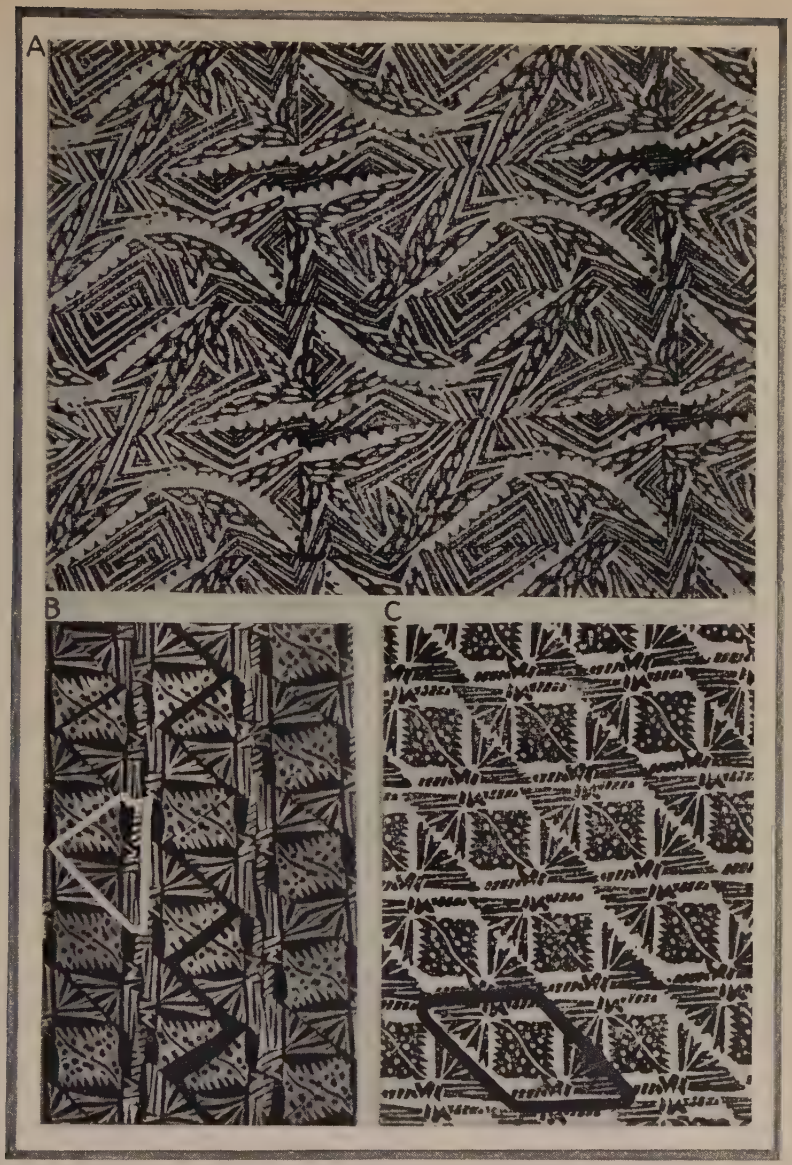


Plate 1. Prints from blocks designed by Miss Phyllis Barron
referred to in the text

Plate 2. Process of block-printing on fabric. Miss Barron at work

Plate 3. Some blocks designed and cut by Phyllis Barron and Dorothy Larcher

Plate 4. Indian Calico Printer, from model in the Indian Museum, South Kensington

Reproduced by kind permission

IMPORTANT POINTS

1. All tools should be kept very sharp, frequently ground and stropped.
2. Always work the tool away from the hand which holds the linoleum steady; bad cuts may result from slipping tools.
3. When printing, look at the block each time to see that it is evenly furnished with colour. Some practice is required to produce even prints. The pad should be saturated with colour, but the colour should not splash when the block is put on it. The thickness of colour depends upon the kind of pattern to be printed and the texture of the surface on which it is printed. Careful trials should be made with thick and thin colours.

NOTES ON BLOCK PRINTS ILLUSTRATED ON PAGES 33–36

Page 33. Nos. 1, 2, and 3. Examples of how Indian borders are keyed (reduced to two-thirds natural size). Note the way blocks are cut for continuing pattern easily.
No. 4. In this block a row of holes has been bored through from end to end, and another from side to side, and into these, small holes from the cut-out design open. The depth to which the design is cut is clearly shown on the side. The handle is part of the same piece of wood, as is usually the case, though occasionally it is cut out of a separate piece and pegged on (reduced to one-third natural size).

Page 34. Examples of small Indian wood block prints as units of design, and how they are applied to build up pattern. The fine line examples are probably for embroidered patterns (reduced to two-thirds natural size).

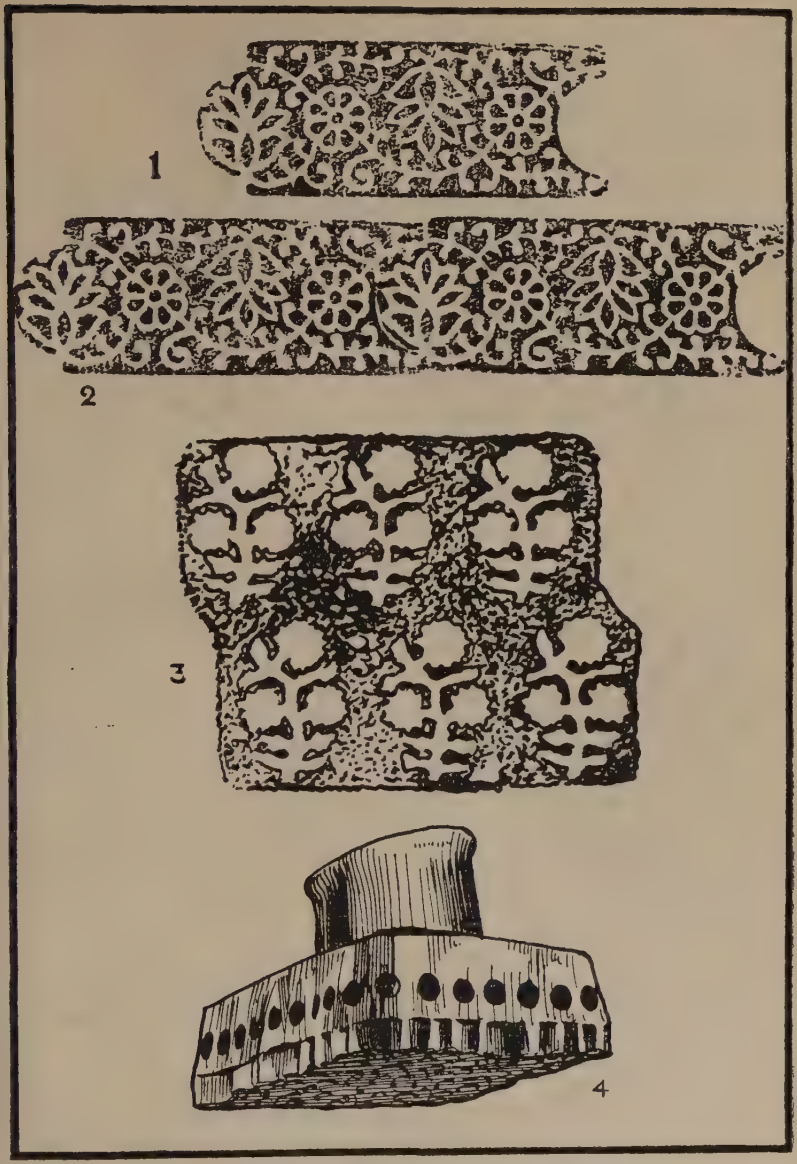
Page 35. Four examples of Indian All-over patterns (reduced to two-thirds natural size).

Page 36. Pattern prints by a Triconopoli cotton printer (reduced to one-third natural size).

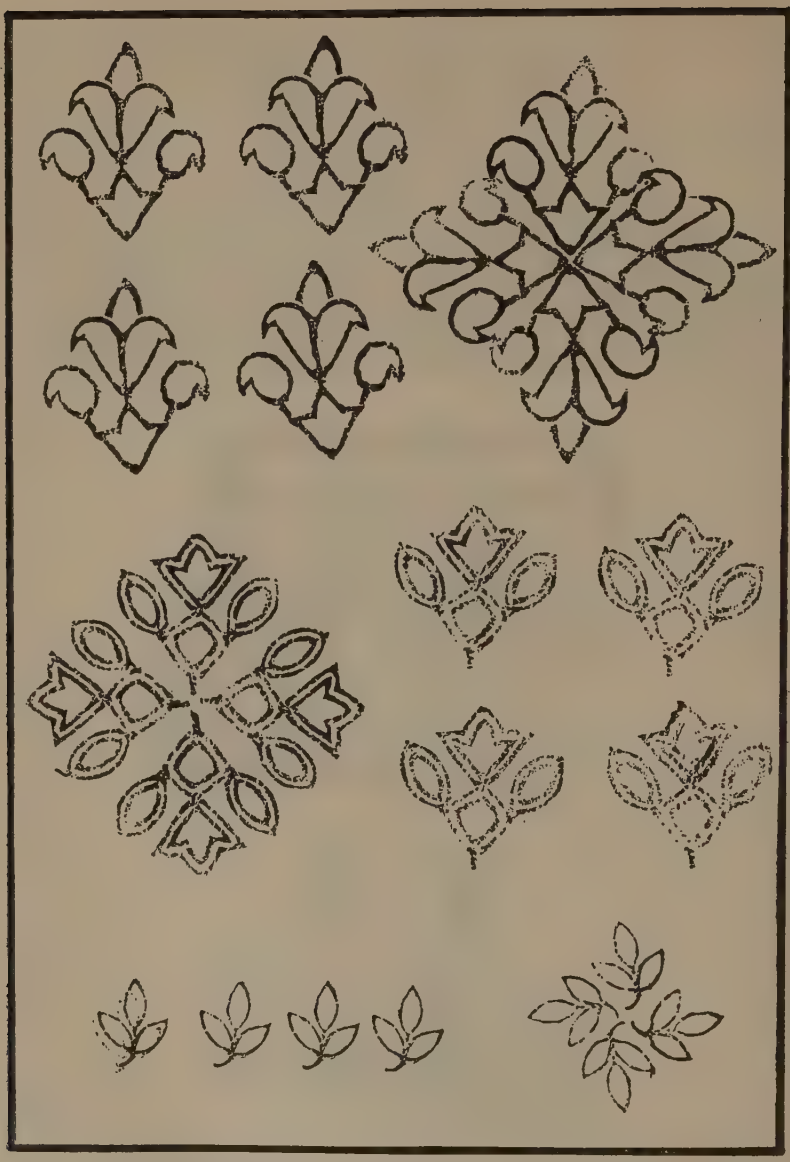
TOOLS AND MATERIALS FOR PRINTING

1. *Knives.* $2\frac{1}{2}''$ long blade, sharp point. (Pocket knives should not be used, as they may shut and cut the fingers.)
2. *Gouges.*
3. *Linoleum* (thick).
4. *Brass Pins,* $\frac{1}{2}''$ long.
5. *Pad.* A piece of board $15'' \times 18''$, padded with a thick lump of wadding with a piece of calico stretched over and tacked down.
6. *Felt* or smooth cotton blanket, $12'' \times 15''$ (1 for each colour used).
7. *Brushes* to spread colour on felt—a painter's brush bound with twine does well, some dyes corrode on metal holders.
8. *Bottles of dye or ink,* strong, as the thickener will dilute them. Powder or paste dyes would be best.
9. *Thickener.* Dextrine (or British gum) boiled with water for 20 minutes.
   Or Boiled Starch paste.
   Gum Tragacanth—soak for 24 hours, then boil in a double saucepan till clear, filter through muslin and bottle for use.
   A little Beta naphthol or acetic acid will prevent any of these from rotting.
10. Carborundum and Oil Stone Slips (for inside of gouges), and leather strops.

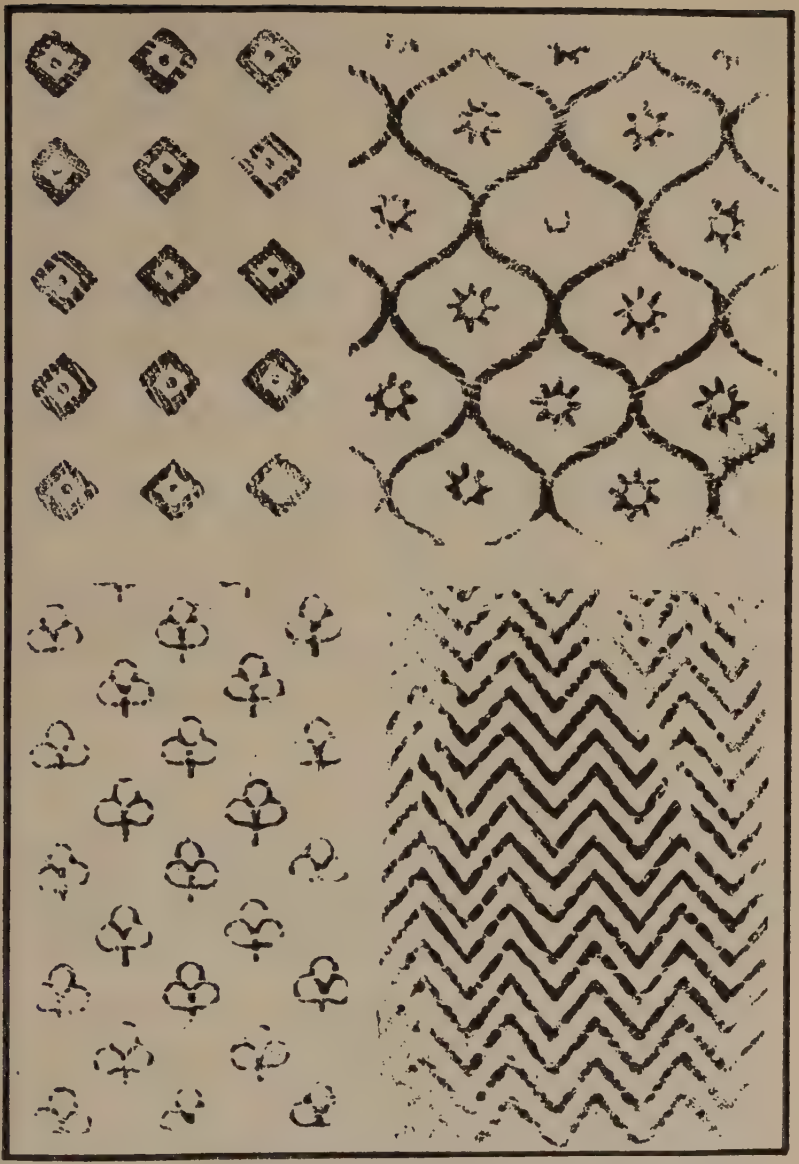
In the Indian section of the Victoria and Albert Museum, there is a good collection of Indian Wood Blocks for fabric printing and embroidery patterns, from which some of the following illustrations have been reproduced by kind permission.



Examples of Indian Wood Blocks



Indian Wood Block Units and application for grouping



Indian Wood Block All-over Patterns

Indian Triconopoli Block Prints

WOOD BLOCK PRINTING, by F. Morley Fletcher. A description of the craft of woodcutting and colour printing based on the Japanese practice. Fully illustrated. 8s. 6d., by post 8s. 9d.

BLOCK PRINTS FROM INDIA FOR TEXTILES, by A. B. Lewis. Twenty-four plates. Field Museum of Natural History, Chicago, 1924.

LA TECHNIQUE MODERNE DU BOIS GRAVE, Et les methodes anciennes des Xylographes du XVI siècle et des maîtres graveurs Yedo, by Maurice Busset, Paris. Delagrave, 1925. Very fully illustrated with original woodcuts and reproductions. The illustrations of tools and methods are especially well done.

LINO-CUTS; A HANDBOOK OF LINOLEUM-CUT COLOUR PRINTING, by C. Flight. John Lane. 10s. 6d.

COLOUR-BLOCK-PRINT MAKING FROM LINOLEUM BLOCKS, by Hesketh Hubbard. Forest Press, Breamore.

MAKING PLASTER CASTS FROM LINOLEUM BLOCKS, by Elsie Mochrie. Dryad Leaflet No. 34. Illustrated. 6d.

WOODCUTS, OR THE PRACTICE OF ENGRAVING AND CUTTING UPON WOOD, by D. P. Bliss. This book, by one of the younger school of wood engravers, is a practical guide to the craft. Besides examples of Mr. Bliss's own work, it contains reproductions from Crawhall, one of the best of the early 19th century engravers. Dryad Booklet. 1s., by post 1s. 2d.

EXAMPLES OF COLOUR PRINTS. Mr. Seaby has kindly done a few prints in three colours of the pony illustrated on page 18 (size $4\frac{1}{2}'' \times 3''$, price 9d.), and of the shield illustrated on page 12 (size $4\frac{1}{2}'' \times 3''$, price 9d.). These can be obtained from the Dryad Handicrafts, who also supply the above-mentioned books on this craft.

COLOUR PRINTS

BY

ALLEN W. SEABY

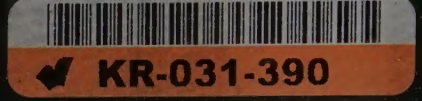
These prints have been designed, cut, and printed by hand in water-colour. The subjects include landscapes and animals. The prints are suitable for school decoration and as examples for pupils undertaking printing in colour. Prices are from a guinea upwards. A portfolio of prints will be sent on approval, on receipt of a card addressed to the artist, 35 Kendrick Road, Reading.

BLOCK-PRINTED FABRICS

BY

PHYLLIS BARRON & DOROTHY LARCHER

Hand-printed silk, velvet, cotton and linen for furnishing and dresses. There are coats and dresses, and orders can be taken at 2 Parkhill Studios, Parkhill Road, Hampstead, N.W. 3, every day, except Saturday, 11 till 6. Telephone: Primrose Hill 0452.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